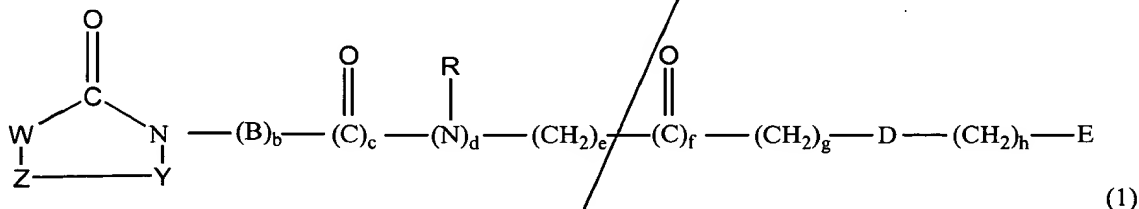


Amended Claims

21. **(Twice Amended)** A method for suppressing inflammation comprising administering to a subject in need thereof an effective amount of a preparation comprising an effective amount of at least one compound of the formula I:



in which

W is $\text{R}^1\text{-A-C(R}^{13}\text{)}$;

Y is a carbonyl;

Z is $\text{N(R}^0\text{)}$;

A is a bivalent radical from the group consisting of (C₁-C₆)-alkylene, (C₃-C₇)-cycloalkylene, phenylene, phenylene-(C₁-C₆)-alkyl, (C₁-C₆)-alkylenephenyl, phenylene-(C₂-C₆)-alkenyl or a bivalent radical of a 5- or 6-membered saturated or unsaturated ring which can contain 1 or 2 nitrogen atoms and can be mono- or disubstituted by (C₁-C₆) alkyl or doubly bonded oxygen or sulfur;

B is a bivalent radical from the group consisting of (C₁-C₆)-alkylene, (C₂-C₆)-alkenylene, phenylene, phenylene-(C₁-C₃)-alkyl, (C₁-C₃)-alkylenephenyl, where the bivalent (C₁-C₆)-alkylene radical can be unsubstituted or substituted by a radical from the group consisting of (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₆)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₆)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl-(C₁-C₆)-alkyl optionally substituted in the heteroaryl radical;

D is $\text{C(R}^2\text{)(R}^3\text{)}$, $\text{N(R}^3\text{)}$ or $\text{CH=C(R}^3\text{)}$;

E is R^{10}CO ;

R is hydrogen, (C₁-C₈)-alkyl, (C₃-C₈)-cycloalkyl, optionally substituted (C₆-C₁₄)-aryl or (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical;

R^0 is (C₃-C₁₂)-cycloalkyl, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl, (C₆-C₁₂)-bicycloalkyl, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-tricycloalkyl, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C₁-C₈)-alkyl optionally substituted in the heteroaryl radical, CHO, (C₁-C₈)-alkyl-CO, (C₃-C₁₂)-cycloalkyl-CO, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl-CO, (C₆-C₁₂)-bicycloalkyl-CO, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl-CO, (C₆-C₁₂)-tricycloalkyl-CO, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl-CO, optionally substituted (C₆-C₁₄)-aryl-CO, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl-CO optionally substituted in the aryl radical, optionally substituted heteroaryl-CO, heteroaryl-(C₁-C₈)-alkyl-CO optionally substituted in the heteroaryl radical, (C₁-C₈)-alkyl-S(O)_n, (C₃-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl-S(O)_n, optionally substituted (C₆-C₁₄)-aryl-S(O)_n, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl-S(O)_n optionally substituted in the aryl radical, optionally substituted heteroaryl-S(O)_n or heteroaryl-(C₁-C₈)-alkyl-S(O)_n optionally substituted in the heteroaryl radical, where n is 1 or 2;

R^1 is X-NH-C(=NH)-(CH₂)_n or X¹-NH-(CH₂)_n, where p is 0, 1, 2 or 3;

X is hydrogen, (C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl, (C₁-C₆)-alkoxycarbonyl, (C₁-C₁₈)-alkylcarbonyloxy-(C₁-C₆)-alkoxycarbonyl, optionally substituted (C₆-C₁₄)-arylcarbonyl, optionally substituted (C₆-C₁₄)-aryloxy, (C₆-C₁₄)-aryl-(C₁-C₆)-alkoxycarbonyl which can also be substituted in the aryl radical, (R⁸O)₂P(O), cyano, hydroxyl (C₁-C₆)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₆)-alkoxy which can also be substituted in the aryl radical, or amino;

X^1 has one of the meanings of X or is R'-NH-C(=N-R''), where R' and R'' independently of one another have the meanings of X;

R^2 is hydrogen, (C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-alkyl optionally substituted in the aryl radical or (C₃-C₈)-cycloalkyl;

R^3 is hydrogen, (C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, (C₃-C₈)-cycloalkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₂-C₈)-alkenylcarbonyl, (C₂-C₈)-alkynylcarbonyl, pyridyl, R¹¹NH, R⁴CO, COOR⁴, CON(CH₃)R¹⁴, CONHR¹⁴, CSNHR¹⁴, COOR¹⁵, CON(CH₃)R¹⁵ or CONHR¹⁵;

- R^4 is hydrogen or (C_1-C_{28}) -alkyl which can optionally be mono- or polysubstituted by identical or different radicals $R^{4'}$; $R^{4'}$ is hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di- $((C_1-C_{18})$ -alkyl)aminocarbonyl, amino- (C_2-C_{18}) -alkylaminocarbonyl, amino- (C_1-C_3) -alkylphenyl- (C_1-C_3) -alkylaminocarbonyl, (C_1-C_{18}) -alkylcarbonylamino- (C_1-C_3) -alkylphenyl- (C_1-C_3) -alkylaminocarbonyl, (C_1-C_{18}) -alkylcarbonylamino- (C_2-C_{18}) -alkylaminocarbonyl, (C_6-C_{14}) -aryl- (C_1-C_8) -alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C_1-C_{18}) -alkoxy, (C_1-C_{18}) -alkoxycarbonyl, optionally substituted (C_3-C_8) -cycloalkyl, halogen, nitro, trifluoromethyl or the radical R^5 ;
- R^5 is optionally substituted (C_6-C_{14}) -aryl, (C_6-C_{14}) -aryl- (C_1-C_8) -alkyl optionally substituted in the aryl radical, a mono- or bicyclic 5- to 12-membered heterocyclic ring which can be aromatic, partially hydrogenated or completely hydrogenated and which can contain one, two or three identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur, a radical R^6 or a radical R^6CO- , where the aryl radical and, independently thereof, the heterocyclic radical can be mono- or polysubstituted by identical or different radicals from the group consisting of (C_1-C_{18}) -alkyl, (C_1-C_{18}) -alkoxy, halogen, nitro, amino and trifluoromethyl;
- R^6 is R^7R^8N , R^7O or R^7S or an amino acid side chain, a natural or unnatural amino acid, imino acid, optionally $N-(C_1-C_8)$ -alkylated or $N-((C_6-C_{14})$ -aryl- (C_1-C_8) -alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to $-NH-CH_2-$, and their esters and amides, where hydrogen or hydroxymethyl can optionally stand in place of optionally protected free functional groups;
- R^7 is hydrogen, (C_1-C_{18}) -alkyl, (C_6-C_{14}) -aryl- (C_1-C_8) -alkyl, (C_1-C_{18}) -alkoxycarbonyl, (C_1-C_{18}) -alkoxycarbonyl, (C_6-C_{14}) -arylcarbonyl, (C_6-C_{14}) -aryl- (C_1-C_8) -alkylcarbonyl or (C_6-C_{14}) -aryl- (C_1-C_{18}) -alkyloxycarbonyl, where the alkyl groups can optionally be substituted by an amino group and/or where the aryl radicals can be mono- or polysubstituted, preferably monosubstituted by identical or different radicals from the group consisting of (C_1-C_8) -alkyl, (C_1-C_8) -alkoxy, halogen, nitro, amino and trifluoromethyl, or is a natural or unnatural amino acid, imino acid, optionally $N-(C_1-C_8)$ -alkylated or $N-((C_6-$

C₁₄)-aryl-(C₁-C₈)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CH₂-;

R⁸ is hydrogen, (C₁-C₁₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl or (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl which can also be substituted in the aryl radical;

R⁹ is hydrogen, aminocarbonyl, (C₁-C₁₈)-alkylaminocarbonyl, (C₃-C₈)-cycloalkylaminocarbonyl, optionally substituted (C₆-C₁₄)-arylaminocarbonyl, (C₁-C₁₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl or (C₃-C₈)-cycloalkyl;

R¹⁰ is hydroxyl, (C₁-C₁₈)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C₆-C₁₄)-aryloxy, amino or mono- or di-((C₁-C₁₈)-alkyl)amino;

R¹¹ hydrogen, (C₁-C₁₈)-alkyl, R¹²CO, optionally substituted (C₆-C₁₄)-aryl-S(O)₂, (C₁-C₁₈)-alkyl-S(O)₂, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or R⁹NHS(O)₂;

R¹² is hydrogen, (C₁-C₁₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, optionally substituted (C₆-C₁₄)-aryl, (C₁-C₁₈)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C₆-C₁₄)-aryloxy, amino or mono- or di-((C₁-C₁₈)-alkyl)amino;

R¹³ is hydrogen, (C₁-C₆)-alkyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or (C₃-C₈)-cycloalkyl;

R¹⁴ is hydrogen or (C₁-C₂₈)-alkyl which can optionally be mono- or polysubstituted by identical or different radicals from the group consisting of hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di-((C₁-C₁₈)-alkyl)-aminocarbonyl, amino-(C₂-C₁₈)-alkylaminocarbonyl, amino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonylamino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonyl-amino-(C₂-C₁₈)-alkylaminocarbonyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C₁-C₁₈)-alkoxy, (C₁-C₁₈)-alkoxycarbonyl, optionally substituted (C₃-C₈)-cycloalkyl, HOS(O)₂-(C₁-C₃)-alkyl, R⁹NHS(O)₂-(C₁-C₃)-alkyl, (R⁸O)₂P(O)-(C₁-C₃)-alkyl, tetrazolyl-(C₁-C₃)-alkyl, halogen, nitro, trifluoromethyl and R⁵;

R¹⁵ is R¹⁶-(C₁-C₆)-alkyl or R¹⁶;

R^{16} is a 6- to 24-membered bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one to four identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C_1-C_4) -alkyl and oxo;

b, c, and d are 1;

e is 0, 1, 2, 3, 4, 5 or 6;

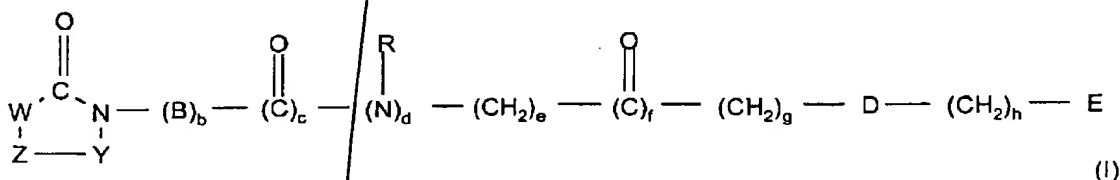
f is 0;

g is 0, 1, 2, 3, 4, 5 or 6;

h is 0, 1, 2, 3, 4, 5 or 6;

in all their stereoisomeric forms and mixtures thereof in any ratio, and of their physiologically tolerable salts.

22. **(Twice Amended)** A method for antagonizing VLA-4 comprising administering to a subject in need thereof an effective amount of a preparation comprising an effective amount of at least one compound of the formula I:



in which

W is $R^1-A-C(R^{13})$;

Y is a carbonyl;

Z is $N(R^0)$;

A is a bivalent radical from the group consisting of (C_1-C_6) -alkylene, (C_3-C_7) -cycloalkylene, phenylene, phenylene- (C_1-C_6) -alkyl, (C_1-C_6) -alkylenophenyl, phenylene- (C_2-C_6) -alkenyl or a bivalent radical of a 5- or 6-membered saturated or unsaturated ring which can contain 1 or 2 nitrogen atoms and can be mono- or disubstituted by (C_1-C_6) -alkyl or doubly bonded oxygen or sulfur;

- B is a bivalent radical from the group consisting of (C₁-C₆)-alkylene, (C₂-C₆)-alkenylene, phenylene, phenylene-(C₁-C₃)-alkyl, (C₁-C₃)-alkylenepheryl, where the bivalent (C₁-C₆)-alkylene radical can be unsubstituted or substituted by a radical from the group consisting of (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₆)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₆)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl-(C₁-C₆)-alkyl, optionally substituted in the heteroaryl radical;
- D is C(R²)(R³), N(R³) or CH=C(R³);
- E is R¹⁰CO;
- R is hydrogen, (C₁-C₈)-alkyl, (C₃-C₈)-cycloalkyl, optionally substituted (C₆-C₁₄)-aryl or -(C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical;
- R⁰ is (C₃-C₁₂)-cycloalkyl, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl, (C₆-C₁₂)-bicycloalkyl, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl, (C₆-C₁₂)-tricycloalkyl, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C₁-C₈)-alkyl optionally substituted in the heteroaryl radical, CHO, (C₁-C₈)-alkyl-CO, (C₃-C₁₂)-cycloalkyl-CO, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl-CO, (C₆-C₁₂)-bicycloalkyl-CO, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl-CO, (C₆-C₁₂)-tricycloalkyl-CO, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl-CO, optionally substituted (C₆-C₁₄)-aryl-CO, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl-CO optionally substituted in the aryl radical, optionally substituted heteroaryl-CO, heteroaryl-(C₁-C₈)-alkyl-CO optionally substituted in the heteroaryl radical, (C₁-C₈)-alkyl-S(O)_n, (C₃-C₁₂)-cycloalkyl-S(O)_n, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl-S(O)_n, (C₆-C₁₂)-bicycloalkyl-S(O)_n, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl-S(O)_n, (C₆-C₁₂)-tricycloalkyl-S(O)_n, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl-S(O)_n, optional substituted (C₆-C₁₄)-aryl-S(O)_n, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl-S(O)_n, optionally substituted in the aryl radical, optionally substituted heteroaryl-S(O)_n or heteroaryl-(C₁-C₈)-alkyl-S(O)_n optionally substituted in the heteroaryl radical, where n is 1 or 2;
- R¹ is X-NH-C(=NH)-(CH₂)_p or X¹-NH-(CH₂)_p, where p is 0, 1, 2 or 3;
- X is hydrogen, (C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl, (C₁-C₆)-alkoxycarbonyl, (C₁-C₁₈)-alkylcarbonyloxy-(C₁-C₆)-alkoxycarbonyl, optionally substituted (C₆-

C₁₄)-arylcabonyl, optionally substituted (C₆-C₁₄)-aryloxyabonyl, (C₆-C₁₄)-aryl-(C₁-C₆)-alkoxyabonyl which can also be substituted in the aryl radical, (R⁸O)₂P(O), cyano, hydroxyl, (C₁-C₆)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₆)-alkoxy which can also be substituted in the aryl radical, or amino;

X¹ has one of the meanings of X or is R'-NH-C(=N-R''), where R' and R'' independently of one another have the meanings of X;

R² is hydrogen, (C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or (C₃-C₈)-cycloalkyl;

R³ is hydrogen, (C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, (C₃-C₈)-cycloalkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₂-C₈)-alkenylcarbonyl, (C₂-C₈)-alkynylcarbonyl, pyridyl, R¹¹NH, R⁴CO, COOR⁴, CON(CH₃)R¹⁴, CONHR¹⁴, CSNHR¹⁴, COOR¹⁵, CON(CH₃)R¹⁵ or CONHR¹⁵;

R⁴ is hydrogen or (C₁-C₂₈)-alkyl which can optionally be mono- or polysubstituted by identical or different radicals R⁴; R⁴ is hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di-((C₁-C₁₈)-alkyl)aminocarbonyl, amino-(C₂-C₁₈)-alkylaminocarbonyl, amino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonylamino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonylamino-(C₂-C₁₈)-alkylaminocarbonyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxyabonyl which can also be substituted in the aryl radical, amino, mercapto, -(C₂-C₁₈)-alkoxy, (C₁-C₁₈)-alkoxyabonyl, optionally substituted -(C₃-C₈)-cycloalkyl, halogen, nitro, trifluoromethyl or the radical R⁵;

R⁵ is optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, a mono- or bicyclic 5- to 12-membered heterocyclic ring which can be aromatic, partially hydrogenated or completely hydrogenated and which can contain one, two or three identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur, a radical R⁶ or a radical R⁶CO, where the aryl radical and, independently thereof, the heterocyclic radical can be mono- or polysubstituted by identical or different radicals from the group consisting of (C₁-C₁₈)-alkyl, (C₁-C₁₈)-alkoxy, halogen, nitro, amino and trifluoromethyl;

- R^6 is R^7R^8N , R^7O or R^7S or an amino acid side chain, a natural or unnatural amino acid, imino acid, optionally N-(C₁-C₈)-alkylated or N-((C₆-C₁₄)-aryl-(C₁-C₁₈)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CR₂-, and their esters and amides, where hydrogen or hydroxymethyl can optionally stand in place of optionally protected free functional groups;
- R^7 is hydrogen, (C₁-C₁₈)-alkyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl, (C₁-C₁₈)-alkylcarbonyl, (C₁-C₁₈)-alkoxycarbonyl, (C₆-C₁₄)-arylcarbonyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkylcarbonyl or (C₆-C₁₄)-aryl-(C₁-C₁₈)-alkyloxycarbonyl, where the alkyl groups can optionally be substituted by an amino group and/or where the aryl radicals can be mono- or polysubstituted, preferably monosubstituted, by identical or different radicals from the group consisting of (C₁-C₈)-alkyl, (C₁-C₈)-alkoxy, halogen, nitro, amino and trifluoromethyl, or is a natural or unnatural amino acid, imino acid, optionally N-(C₁-C₈)-alkylated or N-((C₆-C₁₄)-aryl-(C₁-C₈)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CH₂-;
- R^8 is hydrogen, (C₁-C₁₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl or (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl which can also be substituted in the aryl radical;
- R^9 is hydrogen, aminocarbonyl, (C₁-C₁₈)-alkyl aminocarbonyl, (C₃-C₈)-cycloalkylaminocarbonyl, optionally substituted (C₆-C₁₄)-arylaminocarbonyl, (C₁-C₁₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl or (C₃-C₈)-cycloalkyl;
- R^{10} is hydroxyl, (C₁-C₁₈)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C₆-C₁₄)-aryloxy, amino or mono- or di-((C₁-C₁₈)-alkyl)amino;
- R^{11} is hydrogen, (C₁-C₁₈)-alkyl, $R^{12}CO$, optionally substituted (C₆-C₁₄)-aryl-S(O)₂, (C₁-C₁₈)-alkyl-S(O)₂, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or $R^9NHS(O)_2$;
- R^{12} is hydrogen, (C₁-C₁₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, optionally substituted (C₆-C₁₄)-aryl, (C₁-C₁₈)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C₆-C₁₄)-aryloxy, amino or mono- or di-((C₁-C₁₈)-alkyl)amino;

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cont

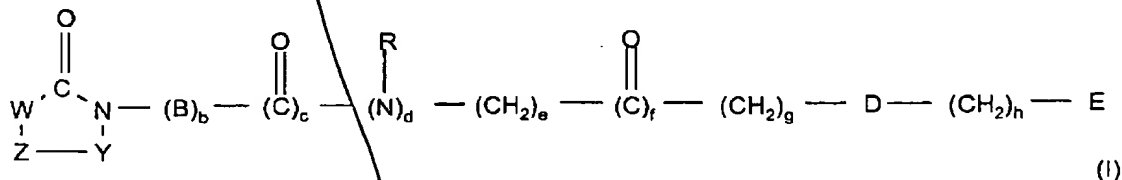
- DI/cont*
- R^{13} is hydrogen, (C_1-C_6) -alkyl, (C_1-C_{14}) -aryl- (C_1-C_8) -alkyl optionally substituted in the aryl radical or (C_3-C_8) -cycloalkyl;
- R^{14} is hydrogen or (C_1-C_{28}) -alkyl which can optionally be mono- or polysubstituted by identical or different radicals from the group consisting of hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di- $((C_1-C_{18})$ -alkyl)-aminocarbonyl, amino- (C_2-C_{18}) -alkylaminocarbonyl, amino- (C_1-C_3) -alkylphenyl- (C_1-C_3) -alkylaminocarbonyl, (C_1-C_{18}) -alkylcarbonylamino- (C_1-C_3) -alkylphenyl- (C_1-C_3) -alkylaminocarbonyl, (C_1-C_{18}) -alkylcarbonyl-amino- (C_2-C_{18}) -alkylaminocarbonyl, (C_6-C_{14}) -aryl- (C_1-C_8) -alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C_1-C_{18}) -alkoxy, (C_1-C_{18}) -alkoxycarbonyl, optionally substituted (C_3-C_8) -cycloalkyl, $HOS(O)_2-(C_1-C_3)$ -alkyl, $R^9NHS(O)_2-(C_1-C_3)$ -alkyl, $(R^8O)_2P(O)-(C_1-C_3)$ -alkyl, tetrazolyl- (C_1-C_3) -alkyl, halogen, nitro, trifluoromethyl and R^5 ;
- R^5 is R^{16} - (C_1-C_6) -alkyl or R^{16} ;
- R^{16} is a 6- to 24-membered bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one to four identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C_1-C_4) -alkyl and oxo;
- b, c, and d are 1;
- e is 0, 1, 2, 3, 4, 5 or 6;
- f is 0;
- g is 0, 1, 2, 3, 4, 5 or 6;
- h is 0, 1, 2, 3, 4, 5 or 6;

in all their stereoisomeric forms and mixtures thereof in any ratio, and of their physiologically tolerable salts.

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23. **(Twice Amended)** A method for treating a disease or disorder selected from the group consisting of rheumatoid arthritis, inflammatory bowel disease, systemic lupus erythematosus, inflammatory disorders of the central nervous system, asthma, allergies, cardiovascular disorders, atherosclerosis, restenoses, diabetes, damage to organ transplants, tumor growth, tumor metastasis, and malaria comprising administering to a subject in need

thereof an effective amount of a preparation comprising an effective amount of at least one compound of the formula I:



in which

W is R¹-A-C(R¹³);

Y is a carbonyl;

Z is N(R⁰);

A is a bivalent radical from the group consisting of (C₁-C₆)-alkylene, (C₃-C₇)-cycloalkylene, phenylene, phenylene-(C₁-C₆)-alkyl, (C₁-C₆)-alkylenephenyl, phenylene-(C₂-C₆)-alkenyl or a bivalent radical of a 5- or 6-membered saturated or unsaturated ring which can contain 1 or 2 nitrogen atoms and can be mono- or disubstituted by (C₁-C₆)-alkyl or doubly bonded oxygen or sulfur;

B is a bivalent radical from the group consisting of (C₁-C₆)-alkylene, (C₂-C₆)-alkenylene, phenylene, phenylene-(C₁-C₃)-alkyl, (C₁-C₃)-alkylenephenyl, where the bivalent (C₁-C₆)-alkylene radical can be unsubstituted or substituted by a radical from the group consisting of (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₆)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₆)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl (C₁-C₆)-alkyl optionally substituted in the heteroaryl radical;

D is C(R²)(R³), N(R³) or CH=C(R³);

E is R¹⁰CO;

R is hydrogen, (C₁-C₈)-alkyl, (C₃-C₈)-cycloalkyl, optionally substituted (C₆-C₁₄)-aryl or (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical;

R⁰ is (C₃-C₁₂)-cycloalkyl, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl, (C₆-C₁₂)-bicycloalkyl, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl, (C₆-C₁₂)-tricycloalkyl, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-

aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C₁-C₈)-alkyl optionally substituted in the heteroaryl radical, CHO, (C₁-C₈)-alkyl-CO, (C₃-C₁₂)-cycloalkyl-CO, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl-CO, (C₆-C₁₂)-bicycloalkyl-CO, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl-CO, (C₆-C₁₂)-tricycloalkyl-CO, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl-CO, optionally substituted (C₆-C₁₄)-aryl-CO, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl-CO optionally substituted in the aryl radical, optionally substituted heteroaryl-CO, heteroaryl-(C₁-C₈)-alkyl-CO optionally substituted in the heteroaryl radical, (C₁-C₈)-alkyl-S(O)_n, (C₃-C₁₂)-cycloalkyl-S(O)_n, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl-S(O)_n, (C₆-C₁₂)-bicycloalkyl-S(O)_n, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl-S(O)_n, (C₆-C₁₂)-tricycloalkyl-S(O)_n, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl-S(O)_n, optionally substituted (C₆-C₁₄)-aryl-S(O)_n, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl-S(O)_n optionally substituted in the aryl radical, optionally substituted heteroaryl-S(O)_n or heteroaryl-(C₁-C₈)-alkyl-S(O)_n optionally substituted in the heteroaryl radical, where n is 1 or 2;

- cont*
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- D1*
cont
- R¹ is X-NH-C(=NH)-(CH₂)_p or X¹-NH-(CH₂)_p, where p is 0, 1, 2 or 3;
- X is hydrogen, (C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl, (C₁-C₆)-alkoxycarbonyl, (C₁-C₁₈)-alkylcarbonyloxy, (C₁-C₆)-alkoxycarbonyl, optionally substituted (C₆-C₁₄)-arylcarbonyl, optionally substituted (C₆-C₁₄)-aryloxycarbonyl, (C₆-C₁₄)-aryl-(C₁-C₆)-alkoxycarbonyl which can also be substituted in the aryl radical, (R⁸O)₂P(O), cyano, hydroxyl, (C₁-C₆)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₆)-alkoxy which can also be substituted in the aryl radical, or amino;
- X¹ has one of the meanings of X or is R'-NH-C(=N-R''), where R' and R'' independently of one another have the meanings of X;
- R² is hydrogen, (C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or (C₃-C₈)-cycloalkyl;
- R³ is hydrogen, (C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, (C₃-C₈)-cycloalkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₂-C₈)-alkenylcarbonyl, (C₂-C₈)-alkynylcarbonyl, pyridyl, R¹¹NH, R⁴CO, COOR⁴, CON(CH₃)R¹⁴, CONHR¹⁴, CSNHR¹⁴, COOR¹⁵, CON(CH₃)R¹⁵ or CONHR¹⁵;
- R⁴ is hydrogen or (C₁-C₂₈)-alkyl which can optionally be mono- or polysubstituted by identical or different radicals R^{4'}; R^{4'} is hydroxyl,

hydroxycarbonyl, aminocarbonyl, mono- or di-((C₁-C₁₈))-alkylaminocarbonyl, amino-(C₂-C₁₈)-alkylaminocarbonyl, amino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonylamino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonylamino-(C₂-C₁₈)-alkylaminocarbonyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C₁-C₁₈)-alkoxy, (C₁-C₁₈)-alkoxycarbonyl, optionally substituted (C₃-C₈)-cycloalkyl, halogen, nitro, trifluoromethyl or the radical R⁵;

R⁵ is optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, a mono- or bicyclic 5- to 12-membered heterocyclic ring which can be aromatic, partially hydrogenated or completely hydrogenated and which can contain one, two or three identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur, a radical R⁶ or a radical R⁶CO-. where the aryl radical and, independently thereof, the heterocyclic radical can be mono- or polysubstituted by identical or different radicals from the group consisting of (C₁-C₁₈)-alkyl, (C₁-C₁₈)-alkoxy, Halogen, nitro, amino and trifluoromethyl;

R⁶ is R⁷R⁸N, R⁷O or R⁷S or an amino acid side chain, a natural or unnatural amino acid, imino acid, optionally N-(C₁-C₈)-alkylated or N-((C₆-C₁₄)-aryl-(C₁-C₈)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CH₂-, and their esters and amides, where hydrogen or hydroxymethyl can optionally stand in place optionally protected free functional groups;

R⁷ is hydrogen, (C₁-C₁₈)-alkyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl, (C₁-C₁₈)-alkylcarbonyl, (C₁-C₁₈)-alkoxycarbonyl, (C₆-C₁₄)-arylcarbonyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkylcarbonyl or (C₆-C₁₄)-aryl-(C₁-C₁₈)-alkyloxycarbonyl, where the alkyl groups can optionally be substituted by an amino group and/or where the aryl radicals can be mono- or polysubstituted, preferably monosubstituted, by identical or different radicals from the group consisting of (C₁-C₈)-alkyl, (C₁-C₈)-alkoxy, halogen, nitro, amino and trifluoromethyl, or is a natural or unnatural amino acid, imino acid, optionally N-(C₁-C₈)-alkylated or N-((C₆-C₁₄)-aryl-(C₁-C₈)-alkylated) azaamino acid or a dipeptide radical which can

also be substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CH₂-;

- Cont*
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- DH*
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- R⁸ is hydrogen, (C₁-C₁₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl or (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl which can also be substituted in the aryl radical;
- R⁹ is hydrogen, aminocarbonyl, (C₁-C₁₈)-alkylaminocarbonyl, (C₃-C₈)-cycloalkylaminocarbonyl, optionally substituted (C₆-C₁₄)-arylaminocarbonyl, (C₁-C₁₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl or (C₃-C₈)-cycloalkyl;
- R¹⁰ is hydroxyl, (C₁-C₁₈)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C₆-C₁₄)-aryloxy, amino or mono- or di-((C₁-C₁₈)-alkyl)amino;
- R¹¹ is hydrogen (C₁-C₁₈)-alkyl, R¹²CO, optionally substituted (C₆-C₁₄)-aryl-S(O)₂, (C₁-C₁₈)-alkyl-S(O)₂, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or R⁹NHS(O)₂;
- R¹² is hydrogen (C₁-C₁₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, optionally substituted (C₆-C₁₄)-aryl, (C₁-C₁₈)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C₆-C₁₄)-aryloxy, amino or mono- or di-((C₁-C₁₈)-alkyl)amino;
- R¹³ is hydrogen, (C₁-C₆)-alkyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or (C₃-C₈)-cycloalkyl;
- R¹⁴ is hydrogen or (C₁-C₂₈)-alkyl which can optionally be mono- or polysubstituted by identical or different radicals from the group consisting of hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di-((C₁-C₁₈)-alkyl)-aminocarbonyl, amino-(C₂-C₁₈)-alkylaminocarbonyl, amino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonylamino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonyl-amino-(C₂-C₁₈)-alkylaminocarbonyl, (C₆-C₁₄)-aryl-(C₁-C₁₈)-alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C₁-C₁₈)-alkoxy, (C₁-C₁₈)-alkoxycarbonyl, optionally substituted (C₃-C₈)-cycloalkyl, HOS(O)₂-(C₁-C₃)-alkyl, R⁹NHS(O)₂-(C₁-C₃)-alkyl, (R⁸O)₂P(O)-(C₁-C₃)-alkyl, tetrazolyl-(C₁-C₃)-alkyl, halogen, nitro, trifluoromethyl and R⁵;
- R¹⁵ is R¹⁶-(C₁-C₆)-alkyl or R¹⁶;
- R¹⁶ is a 6- to 24-membered bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one to four identical or

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different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C₁-C₄)-alkyl and oxo;

b, c, and d are 1;

e is 0, 1, 2, 3, 4, 5 or 6;

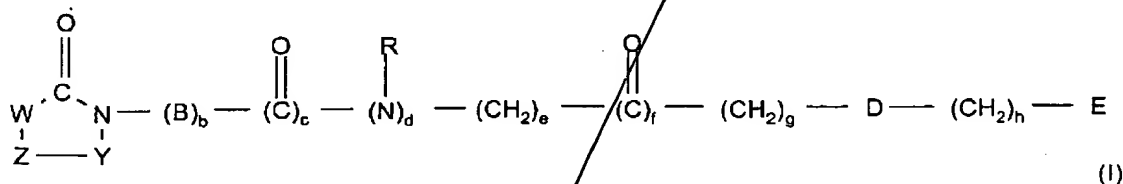
f is 0;

g is 0, 1, 2, 3, 4, 5 or 6;

h is 0, 1, 2, 3, 4, 5 or 6;

in all their stereoisomeric forms and mixtures thereof in any ratio, and of their physiologically tolerable salts.

24. **(Twice Amended)** A method for inhibiting adhesion and/or migration of leucocytes in diseases in which leukocyte adhesion and/or migration exhibits an undesired extent comprising administering to a subject in need thereof an effective amount of a preparation comprising an effective amount of at least one compound of the formula I:



in which

W is R¹-A-C(R¹³);

Y is a carbonyl;

Z is N(R⁰);

A is a bivalent radical from the group consisting of (C₁-C₆)-alkylene, (C₃-C₇)-cycloalkylene, phenylene, phenylene-(C₁-C₆)-alkyl, (C₁-C₆)-alkylenepheryl, phenylene-(C₂-C₆)-alkenyl or a bivalent radical of a 5- or 6-membered saturated or unsaturated ring which can contain 1 or 2 nitrogen atoms and can be mono- or disubstituted by (C₁-C₆)-alkyl or doubly bonded oxygen or sulfur;

B is a bivalent radical from the group consisting of (C₁-C₆)-alkylene, (C₂-C₆)-alkenylene, phenylene, phenylene-(C₁-C₃)-alkyl, (C₁-C₃)-alkyl, (C₁-C₃)-alkylenepheryl, where the bivalent (C₁-C₆)-alkylene radical can be unsubstituted or substituted by a radical from the group consisting of (C₁-C₈)-

alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₆)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₆)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl and heteroaryl-(C₁-C₆)-alkyl optionally substituted in the heteroaryl radical;

D is C(R²)(R³), N(R³) or CH=C(R³);

E is R¹⁰CO;

R is hydrogen, (C₁-C₈)-alkyl, (C₃-C₈)-cycloalkyl, optionally substituted (C₆-C₁₄)-aryl or (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical;

R⁰ is (C₃-C₁₂)-cycloalkyl, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl, (C₆-C₁₂)-bicycloalkyl, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl, (C₆-C₁₂)-tricycloalkyl, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical, optionally substituted heteroaryl, heteroaryl-(C₁-C₈)-alkyl optionally substituted in the heteroaryl radical, CHO, (C₁-C₈)-alkyl-CO, (C₃-C₁₂)-cycloalkyl-CO, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl-CO, (C₆-C₁₂)-bicycloalkyl-CO, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl-CO, (C₆-C₁₂)-tricycloalkyl-CO, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl-CO, optionally substituted (C₆-C₁₄)-aryl-CO, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl-CO optionally substituted in the aryl radical, optionally substituted heteroaryl-CO, heteroaryl-(C₁-C₈)-alkyl-CO optionally substituted in the heteroaryl radical, (C₁-C₈)-alkyl-S(O)_n, (C₃-C₁₂)-cycloalkyl-S(O)_n, (C₃-C₁₂)-cycloalkyl-(C₁-C₈)-alkyl-S(O)_n, (C₆-C₁₂)-bicycloalkyl-S(O)_n, (C₆-C₁₂)-bicycloalkyl-(C₁-C₈)-alkyl-S(O)_n, (C₆-C₁₂)-tricycloalkyl-S(O)_n, (C₆-C₁₂)-tricycloalkyl-(C₁-C₈)-alkyl-S(O)_n, optionally substituted (C₆-C₁₄)-aryl-S(O)_n, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl-S(O)_n optionally substituted heteroaryl-S(O)_n or heteroaryl-(C₁-C₈)-alkyl-S(O)_n optionally substituted in the heteroaryl radical, where n is 1 or 2;

R¹ is X-NH-C(=NH)-(CH₂)_p or X¹-NH-(CH₂)_p, where p is 0, 1, 2 or 3;

X is hydrogen, (C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl, (C₁-C₆)-alkoxycarbonyl, (C₁-C₁₈)-alkylcarbonyloxy-(C₁-C₆)-alkoxycarbonyl, optionally substituted (C₆-C₁₄)-arylcarbonyl, optionally substituted (C₆-C₁₄)-aryloxycarbonyl, (C₆-C₁₄)-aryl-(C₁-C₆)-alkoxycarbonyl which can also be substituted in the aryl radical.

- $(R^8O)_2P(O)$, cyano, hydroxyl, (C_1-C_6) -alkoxy, (C_6-C_{14}) -aryl- (C_1-C_6) -alkoxy which can also be substituted in the aryl radical, or amino;
- X^1 has one of the meanings of X or is $R'-NH-C(=N-R'')$, where R' and R'' independently of one another have the meanings of X;
- R^2 is hydrogen, (C_1-C_8) -alkyl, optionally substituted (C_6-C_{14}) -aryl, (C_6-C_{14}) -aryl- (C_1-C_8) alkyl optionally substituted in the aryl radical or (C_3-C_8) -cycloalkyl;
- R^3 is hydrogen, (C_1-C_8) -alkyl, optionally substituted (C_6-C_{14}) -aryl, (C_6-C_{14}) -aryl- (C_1-C_8) -alkyl optionally substituted in the aryl radical, (C_3-C_8) -cycloalkyl, (C_2-C_8) -alkenyl, (C_2-C_8) -alkynyl, (C_2-C_8) -alkenylcarbonyl, (C_2-C_8) -alkynylcarbonyl, pyridyl, $R^{11}NH$, R^4CO , $COOR^4$, $CON(CH_3)R^{14}$, $CONHR^{14}$, $CSNHR^{14}$, $COOR^{15}$, $CON(CH_3)R^{15}$ or $CONHR^{15}$;
- R^4 is hydrogen or (C_1-C_{28}) -alkyl which can optionally be mono- or polysubstituted by identical or different radicals $R^{4'}$; $R^{4'}$ is hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di- $((C_1-C_{18})$ -alkyl)aminocarbonyl, amino- (C_2-C_{18}) -alkylaminocarbonyl, amino- (C_1-C_3) -alkylphenyl- (C_1-C_3) -alkylaminocarbonyl, (C_1-C_{18}) -alkylcarbonylamino- (C_1-C_3) -alkylphenyl- (C_1-C_3) -alkylaminocarbonyl, (C_1-C_8) -alkylcarbonylamino- (C_2-C_{18}) -alkylaminocarbonyl, (C_6-C_{14}) -aryl- (C_1-C_8) -alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C_1-C_{18}) -alkoxy, (C_1-C_{18}) -alkoxycarbonyl, optionally substituted (C_3-C_8) -cycloalkyl, halogen, nitro, trifluoromethyl or the radical R^5 ;
- R^5 is optionally substituted (C_6-C_{14}) -aryl, (C_6-C_{14}) -aryl- (C_1-C_8) -alkyl optionally substituted in the aryl radical, a mono- or bicyclic 5- to 12-membered heterocyclic ring which can be aromatic, partially hydrogenated or completely hydrogenated and which can contain one, two or three identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur, a radical R^6 or a radical R^6CO -, where the aryl radical and, independently thereof, the heterocyclic radical can be mono- or polysubstituted by identical or different radicals from the group consisting of (C_1-C_{18}) -alkyl, (C_1-C_{18}) -alkoxy, halogen, nitro, amino and trifluoromethyl;
- R^6 is R^7R^8N , R^7O or R^7S or an amino acid side chain, a natural or unnatural amino acid, imino acid, optionally N- (C_1-C_8) -alkylated or N- $((C_6-C_{14})$ -aryl- (C_1-C_8) -alkylated) azaamino acid or a dipeptide radical which can also be

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- substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CH₂-, and their esters and amides, where hydrogen or hydroxymethyl can optionally stand in place of optionally protected free functional groups;
- D1 cont*
- R⁷ is hydrogen, (C₁-C₁₈)-alkyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl, (C₁-C₁₈)-alkylcarbonyl, (C₁-C₁₈)-alkoxycarbonyl, (C₆-C₁₄)-arylcarbonyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkylcarbonyl or (C₆-C₁₄)-aryl-(C₁-C₁₈)-alkyloxycarbonyl, where the alkyl groups can optionally be substituted by an amino group and/or where the aryl radicals can be mono- or polysubstituted, preferably monosubstituted, by identical or different radicals from the group consisting of (C₁-C₈)-alkyl, (C₁-C₈)-alkoxy, halogen, nitro, amino and trifluoromethyl, or is a natural or unnatural amino acid, imino acid, optionally N-(C₁-C₈)-alkylated or N-((C₆-C₁₄)-aryl-(C₁-C₈)-alkylated) azaamino acid or a dipeptide radical which can also be substituted in the aryl radical and/or in which the peptide bond can be reduced to -NH-CH₂-;
- R⁸ is hydrogen, (C₁-C₁₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl or (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl which can also be substituted in the aryl radical;
- R⁹ is hydrogen, aminocarbonyl, (C₁-C₁₈)-alkylaminocarbonyl, (C₃-C₈)-cycloalkylaminocarbonyl, optionally substituted (C₆-C₁₄)-arylaminocarbonyl, (C₁-C₁₈)-alkyl, optionally substituted (C₆-C₁₄)-aryl or (C₃-C₈)-cycloalkyl;
- R¹⁰ is hydroxyl, (C₁-C₁₈)-alkoxy, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C₆-C₁₄)-aryloxy, amino or mono- or di-((C₁-C₁₈)-alkyl)amino;
- R¹¹ is hydrogen, (C₁-C₁₈)-alkyl, R¹²CO, optionally substituted (C₆-C₁₄)-aryl-S(O)₂, (C₁-C₁₈)-alkyl-S(O)₂, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or R⁹NHS(O)₂;
- R¹² is hydrogen, (C₁-C₁₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, optionally substituted (C₆-C₁₄)-aryl, (C₁-C₁₈)-alkoxy, (C₆-C₁₄)-aryl, (C₁-C₈)-alkoxy which can also be substituted in the aryl radical, optionally substituted (C₆-C₁₄)-aryloxy, amino or mono- or di-((C₁-C₁₈)-alkyl)amino;
- R¹³ is hydrogen, (C₁-C₆)-alkyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkyl optionally substituted in the aryl radical or (C₃-C₈)-cycloalkyl;
- R¹⁴ is hydrogen or (C₁-C₂₈)-alkyl which can optionally be mono- or polysubstituted by identical or different radicals from the group consisting of

hydroxyl, hydroxycarbonyl, aminocarbonyl, mono- or di-((C₁-C₁₈)-alkyl-aminocarbonyl, amino-((C₂-C₁₈)-alkylaminocarbonyl, amino-(C₁-C₄)-alkylphenyl-(C₁-C₄)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonylamino-(C₁-C₃)-alkylphenyl-(C₁-C₃)-alkylaminocarbonyl, (C₁-C₁₈)-alkylcarbonyl-amino-(C₂-C₁₈)-alkylaminocarbonyl, (C₆-C₁₄)-aryl-(C₁-C₈)-alkoxycarbonyl which can also be substituted in the aryl radical, amino, mercapto, (C₁-C₁₈)-alkoxy, (C₁-C₁₈)-alkoxycarbonyl, optionally substituted (C₃-C₈)-cycloalkyl, HOS(O)₂-(C₁-C₃)-alkyl, R⁹NHS(O)₂-(C₁-C₃)-alkyl, (R⁸O)₂P(O)-(C₁-C₃)-alkyl, tetrazolyl-(C₁-C₃)-alkyl, halogen, nitro, trifluoromethyl and R⁵;

R¹⁵ is R¹⁶-(C₁-C₆)-alkyl or R¹⁶;

R¹⁶ is a 6- to 24-membered bicyclic or tricyclic radical which is saturated or partially unsaturated and which can also contain one to four identical or different heteroatoms from the group consisting of nitrogen, oxygen and sulfur and which can also be substituted by one or more identical or different substituents from the group consisting of (C₁-C₄)-alkyl and oxo;

b, c, and d are 1;

e is 0, 1, 2, 3, 4, 5 or 6;

f is 0;

g is 0, 1, 2, 3, 4, 5 or 6;

h is 0, 1, 2, 3, 4, 5 or 6;

in all their stereoisomeric forms and mixtures thereof in any ratio, and of their physiologically tolerable salts.